

H E A D S

OF A

Course of Lectures

ON THE

NATURAL HISTORY

OF THE

*Celestial Bodies, The Earth, the Vegetable
The Atmosphere, and Animal Kingdoms.*

INCLUDING THE

HISTORY OF MAN,

AND THE

Most effectual Means of preserving Health.

By HENRY MOYES, M. D.

The Course will consist of Eighteen Lectures.

Admittance to the WHOLE ONE GUINEA ;

TO a SINGLE LECTURE, TWO SHILLINGS.

The LECTURES will begin



H E A D S

O F A

COURSE of LECTURES, &c.

L E C T U R E I.

ON THE NATURAL HISTORY OF THE SUN.

- 1 **A** GENERAL VIEW of the MATERIAL UNIVERSE.
- 2 Some general Observations relating to the SUN.
- 3 Several Opinions of the most eminent Philosophers concerning the Nature and Production of the SUN's LIGHT.
- 4 These Opinions erroneous, and the true Cause of the SOLAR LIGHT assigned.
- 5 The SPOTS on the SUN—their History—their Phenomena explained upon new Principles.
- 6 Of SOLAR MOUNTAINS —their Height, Magnitude, &c.
- 7 Arguments to prove the Existence of a SOLAR ATMOSPHERE—its Uses in the System, and the Phenomena resulting from the Variation of its Density, Transparency, &c.
- 8 Of TIDES in the SUN—of the Constitution of that Luminary.

9 The

- 9 The SUN not Hot, and how it excites the Principle of Heat in the Earth and Planets.
 - 10 The USES of the SUN in the SOLAR SYSTEM.
-

L E C T U R E II.

ON THE NATURAL HISTORY OF THE PLANETS, COMETS, AND FIXED STARS.

- 1 **O**F MERCURY.
- 2 Of VENUS.
- 3 Of the EARTH.
- 4 Of the MOON — the Appearance of her Surface when viewed through a good Telescope—her Atmosphere demonstrated, and its Nature explained—the true Height of the Lunar Mountains, and an Account of a very singular Phenomenon observed in the Moon during a Solar Eclipse.
- 5 Of MARS.
- 6 Of JUPITER—his Moons, Atmosphere, and regular Winds, the Constitution of his Body, &c. — the Magnitude of his Mountains.
- 7 Of SATURN—his Moons, Ring, &c.
- 8 Of the GEORGIUM SIDUS, or lately discovered Planet.
- 9 Of COMETS in general — their Orbits, Periods, Number, and Magnitude—their Distances from the Sun, and the Heat and Cold they sustain—the Phenomena and Cause of their Trains — the Trains wisely appointed by the Author of Nature.
- 10 Of the FIXED STARS in general — their Classes, Number, Distances, Magnitude, and Uses — new Stars described and accounted for—the Motions of the FIXED STARS explained.

LECTURE III.

ON GRAVITY AND MAGNETISM.

- 1 **T**HE ATTRACTION of the elementary Particles of MATTER—what would happen if suspended—how far it extends from the Centre of each Particle.
 - 2 GRAVITY the same with ATTRACTION—Bodies not heavy at the Earth's Centre—their Weight greatest at the Earth's Surface.
 - 3 The ATTRACTION of Mountains, and the Consequences to which it leads.
 - 4 Of MAGNETISM in general — of NATURAL MAGNETS—their Constitution, and where found.
 - 5 The History of MAGNETISM — the Invention of the Compass—the Variation and Dip of the Needle—their History, &c. an Attempt to account for the above-mentioned Phenomena upon new Principles.
-

LECTURE IV.

ON ELECTRICITY.

- 1 **T**HE History of ELECTRICITY.
 - 2 Curious Property of CHARCOAL and ICE.
- 3 The Nature of the electrical Fluid.
- 4 LATENT ELECTRICITY.
- 5 LATENT ELECTRICITY, how rendered sensible.
- 6 POSITIVE and NEGATIVE ELECTRICITY.
- 7 PHENOMENA attending the Motion of the Electrical Fluid.
- 8 ELECTRICITY of the Clouds.
- 9 THUNDER and LIGHTNING.

- 10 The Distance of THUNDER, how estimated.
 - 11 The rumbling Noise of THUNDER accounted for.
 - 12 Why the Earth is not struck every Time it thunders.
 - 13 How LIGHTNING may be drawn from the Clouds.
 - 14 Cautions necessary in these Experiments.
 - 15 Of guarding Buildings, &c. from the EFFECTS of LIGHTNING.
 - 16 The usual Method insufficient.
 - 17 A new Method proposed.
 - 18 Most eligible Situations during a Thunder Storm.
 - 19 Of darkening a Room during Thunder.
 - 20 In what Manner Animals are killed by Electricity.
 - 21 Concerning the Application of Electricity to medicinal Purposes.
-

LECTURE V.

ON THE STRUCTURE OF THE EARTH.

- 1 THE THREE KINGDOMS of NATURE defined.
- 2 Of the EARTH in general—its Strata—their relative Position, Connexion, Dipping, &c.
- 3 Of the Fissures, or perpendicular Divisions of the Strata, their Width, Contents, and Depths.
- 4 Of the Veins of Metallic Ores, the empty Fissures of the Earth, and the trapping down of the Strata.
- 5 The THEORY of the EARTH — different Opinions concerning it.
- 6 Of FOSSIL SHELLS, and other Marine Productions lodged in the Earth.
- 7 Of Mountains primary and secondary.

8 The

- 8 The Formation of dry Land.
 - 9 Of the universal Deluge.
-

LECTURE VI, OF EARTHQUAKES AND BURNING MOUNTAINS.

- 1 **O**F BURNING MOUNTAINS in general.
2 Of ÆTNA.
- 3 Of VESUVIUS.
- 4 Of HECLA.
- 5 A general Account of the BURNING MOUNTAINS in Asia, Africa, and America.
- 6 The CAUSE of BURNING MOUNTAINS explained on new Principles—these Principles confirmed, and illustrated by Variety of Facts.
- 7 The USES of BURNING MOUNTAINS in the Economy of the Globe.
- 8 Of EARTHQUAKES — their true Cause explained and exemplified.
- 9 The general Phenomena of EARTHQUAKES described.
- 10 An Account of the most remarkable EARTHQUAKES from the Commencement of History to the present Time.

LECTURE

LECTURE VII.

ON REGULAR WINDS.

- 1 OF WINDS in general—WINDS classed and subdivided—their History imperfect.
 - 2 The true Cause of the TRADE-WINDS explained and illustrated.
 - 3 Of the TRADE-WINDS in the Atlantic and Pacific Oceans.
 - 4 Of PERIODICAL WINDS in general.
 - 5 Of the SEA and LAND BREEZES in the Torrid Zone.
 - 6 Of the WINDS on the Coast of America, of Britain, and Africa.
 - 7 Of the HARMATTAN—its History and Cause.
 - 8 Of the SIROCC and its Effects.
 - 9 The Cause of the MONSOONS pointed out.
 - 10 The Uses of the REGULAR WINDS.
-

LECTURE VIII.

ON VARIABLE WINDS, HURRICANES, WHIRLWINDS, AND WATER SPOUTS.

- 1 OF VARIABLE WINDS in general—their History and Phenomena.
- 2 The Prevalency of the WESTERLY WIND in the open Sea of both Hemispheres; and why the EASTERLY WIND raises the Mercury in the Barometer.
- 3 The remarkable Coldness of the EAST WINDS accounted for.

- 4 Concerning the Strength and Velocity of the WIND.
 - 5 Our WINDS compared with those of Jupiter.
 - 6 The Uses of the variable WINDS; and a new Theory to explain their Phenomena.
 - 7 The SPRING and AUTUMNAL GALES accounted for.
 - 8 Of HURRICANES and TORNADOS—their Phenomena and Cause.
 - 9 The Theory of WHIRLWINDS explained and illustrated—their History and Phenomena.
 - 10 Of WATER SPOUTS—their Cause, Phenomena, Natural History and Use.
-

LECTURE IX.

ON METEORS.

- 1 OF RAIN—a new Theory to account for it—concerning the Quantity of RAIN at different Altitudes from the Earth.
- 2 Of DEW—proved to proceed from ascending Vapour.
- 3 Of SNOW—its Cause and Uses.
- 4 Of HAIL—its History and Cause.
- 5 Of FIERY METEORS in general—the Observations of the Ancients concerning them.
- 6 Of FALLING STARS—their History and Cause.
- 7 Of FLYING DRAGONS, and other Phenomena of a similar Kind, accounted for on new Principles—these illustrated and confirmed by Appearances of this Kind, during last Summer.
- 8 Of the AURORA BOREALIS—its History and Cause—why it seldom appeared before the present Century; and how soon it will probably cease to appear—its Use in Nature.

LECTURE

LECTURE X.

ON SPRINGS, RIVERS, THE OCEAN, &c.

- 1 OF SPRINGS and FOUNTAINS.—Their Cause and Phenomena.—Petrifying Springs accounted for—Why some Springs reciprocate, and others appear near the Tops of Mountains.
 - 2 Of HOT SPRINGS—Their History and Cause.
 - 3 The Spouting Springs of Iceland described and accounted for.
 - 4 Of RIVERS—Observations relating to the Declivity of their Channels—Their Banks frequently higher than the adjacent Grounds—The Intention of Nature in the Junction of Rivers—Observations concerning their Sinuosities and Windings—Why their Surface is frequently Convex and Concave.
 - 5 Of CATARACTS—Of the Water-fall of Niagara.
 - 6 Of the OCEAN—Its Depth, Temperature, Luminous Appearance, and the Origin of its Saltness.
 - 7 Of the TIDES—Their Cause and Phenomena.
-

LECTURE XI.

ON THE STRUCTURE OF PLANTS.

- 1 OF the CUTICLE—The Bark—The Wood—The Air-Vessels—The Insertions—The Vasa Propria—The Production of the Wood—The Pith, &c.
- 2 The Anatomy of PLANTS and ANIMALS compared.
- 3 Why Vegetables are less capable of supporting Changes of Climate than Animals.

4 Of

- 4 Of the DISEASES of Plants—Sometimes contagious.
 - 5 A wonderful Faculty in the Economy of Vegetables.
 - 6 Every Part of the Vegetable Body essentially the same with regard to Life.
 - 7 Of the Means employed by Nature for the Preservation of Plants, and the Advantages they derive from Snow.
 - 8 The Cause and Uses of the GREEN COLOUR so generally diffused in the Vegetable Kingdom.
-

L E C T U R E XII.

ON VEGETATION, AND THE FOOD OF PLANTS.

- 1 **O**F the ECONOMY of PLANTS in general.
 - 2 Their Perspiration, and Perspirable Matter.
- 3 The Motion of the Sap, and the Cause producing it.
- 4 The Food of Plants investigated.
- 5 Of TILLAGE, and the Operations of Manures.
- 6 Observations concerning the Digestion of Plants, and the Nourishment which Vegetables receive from the Atmosphere.
- 7 The THEORY of Vegetation, and the Origin of Buds and Fruits.
- 8 Facts concerning the Growth and Age of Plants—an useful Rule in Gardening.

LECTURE XIII.

ON THE INSTINCT AND OTHER FACULTIES OF PLANTS.

- 1 **F**ACTS and OBSERVATIONS relating to the MOTIONS and INSTINCT of PLANTS.
 - 2 PLANTS endued with a PRINCIPLE of SELF-PRESERVATION.--This conspicuous in SCANDENT PLANTS.
 - 3 The IRRITABILITY and LIVING PRINCIPLE of VEGETABLES.
 - 4 The SENSITIVE PLANT, and VENUS's FLY-TRAP.
 - 5 The SLEEP of PLANTS.—The PHENOMENA and CAUSE.
 - 6 The PROGRESS of the VEGETABLE BODY, from Infancy through Youth and Maturity to old Age, Decrepitude, and Death.
 - 7 The manifold USES of VEGETABLES in the Economy of the Globe.
-

LECTURE XIV.

ON ANIMALS.

- 1 **G**ENERAL OBSERVATIONS concerning the SCALE of BEING—Several Degrees of it ascertained and pointed out.
- 2 A GENERAL VIEW of the ANIMAL KINGDOM.
- 3 The Cause of Varieties among Animals examined--The Effect of Culture on these Varieties considered and exemplified.
- 4 Of the HUMAN SPECIES in general.—Its Varieties with regard to Colour.—An Attempt to explain the true Cause of these Varieties.

L E C-

LECTURE XV.

ON THE PROGRESS OF MAN FROM RUDE- NESS TO REFINEMENT.

- 1 **R**EASON and INSTINCT compared.
 - 2 REASON not wholly denied to Brutes.
 - 3 The Distinction between MAN and other ANIMALS.
 - 4 MAN naturally a Social Being.
 - 5 The Progress of Society analogous to that of Individuals.—This Analogy traced and illustrated.
 - 6 Of MAN in a Savage State, and the peculiar Characters of his MIND in that Condition.
 - 7 Of MAN in the Shepherd State, and of the Manners peculiar to that Stage of Society.
 - 8 The State of MEN when they have made some Progress in Agriculture.
 - 9 The Origin of the FEUDAL SYSTEM, and its Influence on the Manners of Europe.
 - 10 The Rise of CHIVALRY, and the laudable Ends for which it was intended.
 - 11 The Effects of CHIVALRY upon the Taste and Genius of the European Nations.—The Cause of its Decline, and final Extinction.
 - 12 The Revival of Letters at Rome, and its Progress from thence over the Western World.
 - 13 The Present State of Europe.
-

LECTURE XVI.

CONCERNING MAN IN A STATE OF INFANCY.

- 1 **S**OME GENERAL OBSERVATIONS with regard to the Growth of the HUMAN BODY.

The

- 2 The Treatment of INFANTS, and the Advantages they derive from frequent Changes of Air.
 - 3 Rules and Observations relating to the Clothing of CHILDREN, and to their Food before and after Weaning.
 - 4 Of the SLEEP of Children. How Squinting is often acquired, and may sometimes be cured.
 - 5 The extraordinary Activity of Children given them for the wisest Purposes.
 - 6 The Advantages of an early Education.—The most eligible Situations for their Tuition considered and pointed out.
-

L E C T U R E XVII.

ON AIR, EXERCISE, BATHING, &c.

- 1 **A** GENERAL VIEW of the HUMAN CONSTITUTION.
- 2 Of Wholesome and Unwholesome AIR.
- 3 Signs of Healthy and Unhealthy Situations.
- 4 The AIR of Cities less hurtful than is generally imagined, and more healthy than that of the Country in the Winter Season.
- 5 The ADVANTAGES of spending the Summer in the Country, and the Winter in Town.
- 6 Of EXERCISE.—The best Kinds of it pointed out and considered.
- 7 Of COLD-BATHING.—Its Effects on the System.—Directions concerning its Use and Application.
- 8 Of HEAT and COLD.—How far advantageous.
- 9 SLEEPING and WAKING.—Directions concerning them.

L E C-

LECTURE XVIII.

ON ALIMENT.

- 1 **O**F DIGESTION.—A remarkable Property of it.
—The Cause of the Sensation of Hunger explained.
- 2 MAN designed to subsist upon both Animal and Vegetable Food.
- 3 Of ANIMAL FOOD.—Directions concerning its Use.
- 4 Of VEGETABLE FOOD.—Its Effects upon the Body and Mind.
- 5 What Proportion of Animal and Vegetable Food the most salutary.
- 6 Of DRINK in general.
- 7 Of Wine—Malt Liquors—Water—Tea and Coffee.
- 8 The Effects of the PASSIONS on the Health and Well-being of the Human Economy.



Med. Hist.
vol 2
570
M. 1586
1795